

Amendments to the Claims:

This listing of the claims replaces all prior listings and versions of the claims in this application.

Listing of the Claims:

Claim 1 (Currently Amended): A hydrogel comprising a network of hydrophilic ~~polymers~~ polymer having ~~hydrogel~~ hydroxyl group-carrying carbon to carbon backbones and having a tensile strength of at least 1 MPa, wherein the network is formed by crosslinks in the hydrophilic polymer.

Claim 2 (Currently Amended): A hydrogel ~~according to claim 1 having~~ comprising a network of hydrophilic polymer having hydroxyl group-carrying carbon to carbon backbones and having a tensile strength of at least 1 MPa and an elasticity modulus less than about 10 kPa.

Claim 3 (Original): A hydrogel according to claim 1 having a tensile strength of at least about 5 MPa.

Claim 4 (Original): A hydrogel according to claim 1 having an elongation of at least 50% at equilibrium water content.

Claim 5 (Currently Amended): A hydrogel ~~according to claim 1 having~~ comprising a network of hydrophilic polymer having hydroxyl group-carrying carbon to carbon backbones

and having a tensile strength of at least 1 MPa and sufficient optical clarity so as to obtain an optical transmission of at least about 40%.

Claim 6 (Currently Amended): A hydrogel ~~according to claim 1 having~~ comprising a network of hydrophilic polymer having hydroxyl group-carrying carbon to carbon backbones and having a tensile strength of at least 1 MPa and a refractive index of at least about 1:40.

Claim 7 (Currently Amended): A hydrogel ~~according to claim 1, comprising a network of hydrophilic polymer having hydroxyl group-carrying carbon to carbon backbones and having a tensile strength of at least 1 MPa,~~ wherein the hydrophilic ~~polymers have~~ polymer has a molecular weight of at least 200,000.

Claim 8 (Previously Presented): A hydrogel according to claim 1 having a polymer content of about 30 to 80% (wt).

Claim 9 (Currently Amended): A hydrogel ~~according to claim 1, comprising a network of hydrophilic polymer having hydroxyl group-carrying carbon to carbon backbones and having a tensile strength of at least 1 MPa,~~ wherein the hydrophilic polymer is chemically modified with agent capable of reducing its equilibrium water content.

Claim 10 (Original): A hydrogel according to claim 9, wherein said agent is a monoisocyanate.

Claim 11 (Original): A hydrogel according to claim 10, wherein said monoisocyanate is a lower alkyl, aryl or arylalkyl isocyanate.

Claim 12 (Previously Presented): A hydrogel according to claim 1 wherein the hydrophilic polymer is at least one selected from the group consisting of $-(\text{CH}_2\text{-CHOH})_n$ - (polyvinyl alcohol); $-(\text{CH}_2\text{-CH}_2)_n(\text{CH}_2\text{-CHOH})_m$ - (copolymer of ethylene and vinyl alcohol); $-(\text{CH}_2\text{-CH}_2\text{-CHOH})_n$ - (poly(1-hydroxy-1,3-propanediyl)); and $-(\text{CH}_2\text{-CH}(\text{CH}_2\text{OH}))_n$ - (polyallyl alcohol).

Claim 13 (Currently Amended): A hydrogel ~~according to claim 12~~, comprising a network of hydrophilic polymer having hydroxyl group-carrying carbon to carbon backbones and having a tensile strength of at least 1 MPa, wherein the hydrophilic polymer is polyallyl alcohol.

Claim 14 (Canceled).

Claim 15 (Currently Amended): A hydrogel ~~according to claim 14~~ comprising a network of hydrophilic polymer having hydroxyl group-carrying carbon to carbon backbones and having a tensile strength of at least 1 MPa, wherein the network is formed by crosslinks in the hydrophilic polymer and wherein the crosslinking density is less than about 10%.

Claim 16 (Previously Presented): A hydrogel according to claim 15 crosslinked by a diisocyanate.

Claim 17 (Original): A hydrogel according to claim 16, wherein said diisocyanate has a formula $\text{OCN}-(\text{CH}_2)_4\text{-NH-C(O)O}-(\text{CH}_2)_4\text{-O(O)C-NH}-(\text{CH}_2)_4\text{-NCO}$.

Claim 18 (Original): A hydrogel according to claim 16 having crosslinks of the formula $\text{-O-C(O)-NH-R-NH-C(O)-O-}$, wherein R is a spacing group.

Claim 19 (Currently Amended): A hydrogel according to claim ~~19~~ 18, wherein R is an optionally substituted lower alkyl group having one to ten carbon atoms.

Claim 20 (Previously Presented): A hydrogel according to claim 19, wherein R is $-(\text{CH}_2)_4-$.

Claim 21 (Currently Amended): A hydrogel ~~according to claim 14~~ comprising a network of hydrophilic polymer having hydroxyl group-carrying carbon to carbon backbones and having a tensile strength of at least 1 MPa, wherein the hydrophilic polymer is crosslinked by an epoxy compound.

Claim 22 (Currently Amended): A hydrogel ~~according to claim 12~~ comprising a network of hydrophilic polymer having hydroxyl group-carrying carbon to carbon backbones and having a tensile strength of at least 1 MPa, wherein the hydrophilic polymer is poly(1-hydroxy-1,3-propanediyl).

Claim 23 (Previously Presented): A hydrogel according to claim 22 crosslinked with diisocyanate.

Claim 24 (Original): A hydrogel comprising poly(1-hydroxy-1,3-propanediyl) crosslinked with a lower alkyl diisocyanate.

Claim 25 (Original): A hydrogel according to claim 24, wherein said lower alkyl diisocyanate is 1,4-butanediisocyanate.

Claim 26 (Previously Presented): A hydrogel according to claim 24, wherein the hydroxyl groups of poly(1-hydroxy-1,3-propanediyl) are modified with a monoisocyanate before being crosslinked with a lower alkyl diisocyanate.

Claim 27 (Previously Presented): An implant made of a hydrogel according to claim 1.

Claim 28 (Previously Presented): An ophthalmic lens made of a hydrogel according to claim 1.

Claim 29 (Currently Amended): An ophthalmic lens ~~according to claim 27~~ made of a hydrogel comprising a network of hydrophilic polymers having hydroxyl group-carrying carbon to carbon backbones and having a tensile strength of at least 1 MPa and having

- (a) an elasticity modulus less than about 10kPa;
- (b) a tensile strength of at least about 1 MPa;
- (c) an elongation of at least 50% at equilibrium water content;
- (d) sufficient optical clarity so as to obtain an optical transmission of at least about 40%; and
- (e) a refractive index of at least about 1.40.

Claims 30-42 (Canceled).

Claim 43 (New): A hydrogel according to claim 2, wherein the elasticity modulus is less than about 5 kPa.

Claim 44 (New): A hydrogel according to claim 7, wherein the hydrophilic polymer has a molecular weight of at least 300,000.

Claim 45 (New): A hydrogel according to claim 8, having a polymer content of about 40 to 70% (wt).

Application Serial No. 09/829,861
Amendment dated October 27, 2003
Reply to Official Action dated May 27, 2003

Claim 46 (New): A hydrogel according to claim 15, wherein the crosslinking density is less than about 5%.

Claim 47 (New): An ophthalmic lens according to claim 29, wherein the elasticity modulus is less than about 5 kPa.